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MORBIDITY AND MORTALITY WEEKLY REPORT

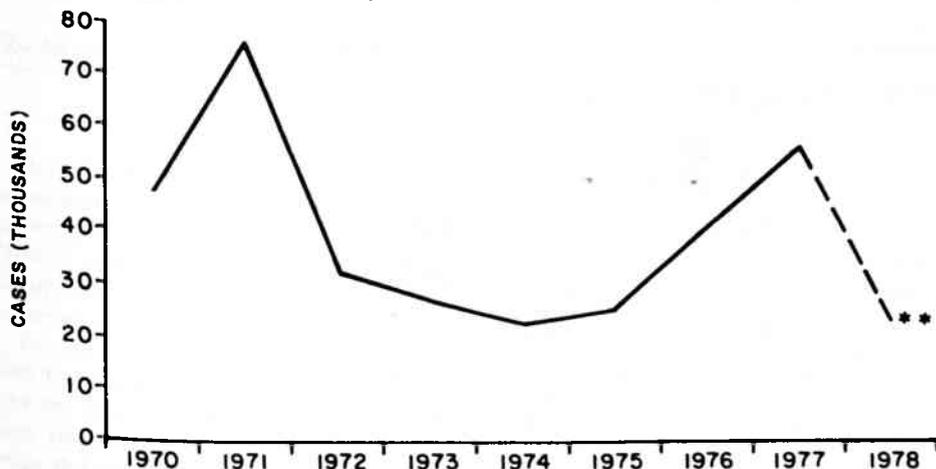
Current Trends

Measles — United States, 1977-1978

During the first 26 weeks of 1978, reported measles activity has been approximately 40% of that reported for the corresponding time period in 1977. This decrease is a continuation of that noted during weeks 41-52 of 1977 (1). Measles activity in 1978 is only approximately 10% greater than that recorded for the same period of 1974, when the lowest annual number of cases (22,094) was reported.

In 1977, 55,201 cases of measles were reported (provisional total). This is a 34.2% increase over the final total of 41,126 cases reported during 1976 and represents the third consecutive year in which there has been an increase in the number of reported cases (Figure 1). By week, however, reported measles activity in 1977 was consistently greater than that reported in 1976 only for the first 40 weeks (1).

FIGURE 1. Reported measles cases, United States, 1970-1977*



*Provisional data have been used for 1977.

**1978 annual total extrapolated from number of cases reported for first 26 weeks of 1978.

The national annual incidence rate in 1977 was 84.6 per 100,000 persons under 18 years of age. The highest rate of any state (496 per 100,000 population under 18) occurred in Iowa. Four other states—Indiana, Minnesota, Montana, and New Hampshire—also had rates more than twice the national average. No state was entirely free of measles during 1977. In 1976, 5 states reported rates of less than 2 cases per 100,000 population under 18 (2). However, the lowest rate in 1977 was 3.9 cases per 100,000 population under 18 reported from North Carolina.

Measles - Continued

Forty states provided age data on reported cases in 1977. As in 1976, a high proportion of reported cases have continued to occur in older children (Table 1). In 1977, 65.0% of cases reported by age occurred in children 10 years of age or older. Prior to 1976, less than 50% of reported measles cases occurred in children 10 years of age or older (3). There was a minimal decrease (5.4%) in the attack rate for children less than 5 years old in 1977 as compared to 1976, and there was no change in the rate for those ≥ 20 years old (Table 1). Increases have occurred in the 5- to 9- and 10- to 14-year-olds and, mostly notably, in the 15- to 19-year-old population (Figure 2).

Reported by the Immunization Div, Bur of State Services, CDC.

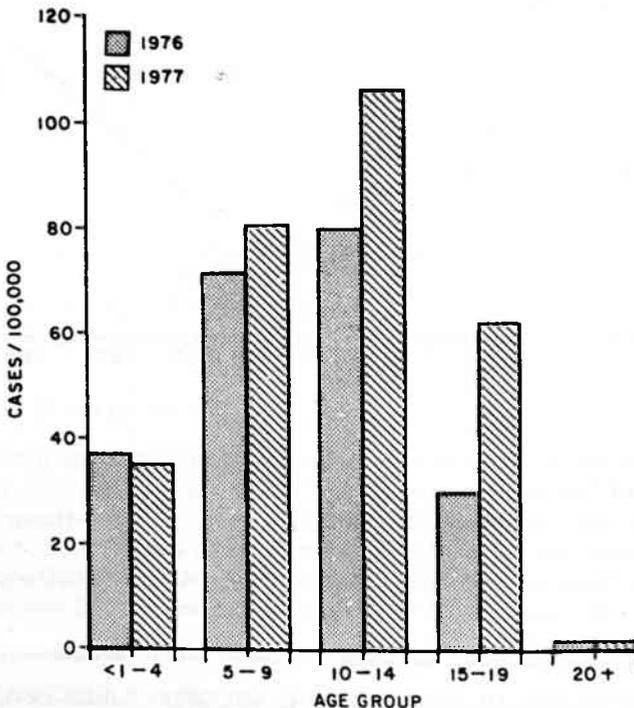
TABLE 1. Percent distribution of reported measles cases and incidence,* by age group, 1976-1977, United States

Age group	1976			1977**			Percent change from 1976 to 1977	
	Total cases	Percent	Cases per 100,000	Total cases	Percent	Cases per 100,000	Percent	Cases per 100,000
<1-4	5,676	13.8	37	5,906	10.7	35	-22.5	- 5.4
5-9	12,338	30.0	71	13,414	24.3	80	-19.0	+ 12.7
10-14	15,587	37.9	79	20,314	36.8	105	+ 2.9	+ 36.6
15-19	6,251	15.2	29	13,580	24.6	61	+61.8	+110.3
20+	1,274	3.1	1	1,987	3.6	1	+16.1	0.0
TOTALS	41,126			55,201				

*Incidence = cases per 100,000 population <18 years of age extrapolated from age distribution of known cases

**Provisional age-specific data for 1977 were available from 40 states.

FIGURE 2. Measles attack rates, by age, 1976-1977



Measles — Continued

Editorial Note: The variation in incidence among states within a given year is dependent upon several factors, including the degree to which cases are reported and the inherent cyclic fluctuation of measles activity.

There are many factors which may be contributing to the current decline in reported measles cases. The heightened measles activity for the last 3 years has reduced the total pool of susceptibles. Also, the total number of doses of measles vaccine administered in public clinics during 1977 increased 52.8% from 1976. Several states have enforced school immunization laws which excluded from school those children who did not have adequate documentation of measles vaccination (3-5). Based on reported cases thus far in 1978, these programs appear to have been highly effective in preventing measles. Rigorous school record review and vaccination of susceptible children in other states should lead to a further decrease in the incidence of measles.

In order to continue effective interruption of measles transmission, this decrease in measles must be coupled with improved surveillance and vaccine delivery and intensive outbreak control projects.

References

1. MMWR 27:39, 1978
2. MMWR 26:109-111, 1977
3. Orenstein WA, Halsey NA, Hayden GF, et al: Current status of measles in the United States, 1973-1977. *J Infect Dis* 137:847-853, 1978
4. MMWR 26:122, 1977
5. MMWR 27:7, 1978

*Epidemiologic Notes and Reports***Hydroquinone Poisoning Aboard a Navy Ship**

Between July 21-31, 1977, 544 crewmen aboard a large U.S. Navy vessel developed gastrointestinal disease (Figure 3). The illness was characterized by the acute onset of nausea, vomiting, abdominal cramps, and diarrhea generally resolving within 12-36 hours. Patients were usually afebrile but had elevated white blood cell counts. Stool and vomitus cultures from patients as well as cultures of water and various foods failed to yield any bacterial pathogens.

On the morning of July 28, when reporting for their required morning roll call, 301 men from 4 units with high attack rates were interviewed. Fifty-five of these individuals met the definition of a case (vomiting during the last 7 days), leaving 246 controls. Interview responses indicated that cases were significantly more likely to have drunk water while the ship was at sea ($p < .001$), implicating the ship's water system.

On July 19, 2 days prior to the onset of the outbreak, a chilled drinking water system to the forward part of the ship was used for the first time in 1½ years. Because the time relationship implicated this system, it was shut down July 28. Within the next 24 hours there was a reduction in the number of cases (Figure 3).

Subsequently, it was learned that the chilled water system supplied water to automatic photo-developing machines on the ship. A makeshift cross-connection (a rubber hose) was detected leading from a 40-gallon tank used to mix photographic developer to the ship's potable water system, which supplied water throughout the ship. When the chilled water system was shut down on July 28, the mixing of photographic developer in the tank ceased. Only 13 more cases were detected after that time.

Hydroquinone Poisoning — Continued

FIGURE 3. Gastroenteritis on a large naval vessel, July 21-31, 1977

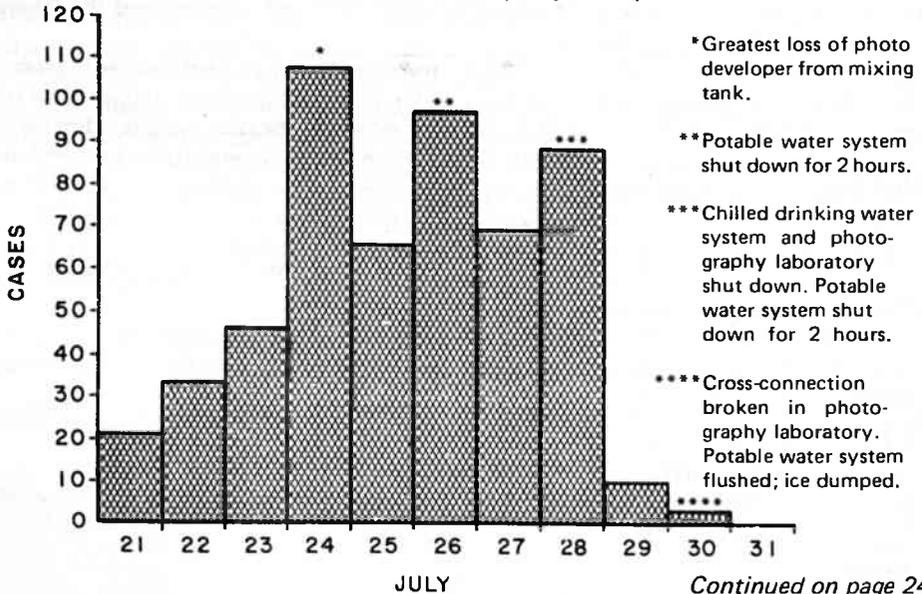


TABLE I. Summary — cases of specified notifiable diseases, United States

[Cumulative totals include revised and delayed reports through previous weeks.]

DISEASE	27th WEEK ENDING		MEDIAN 1973-1977**	CUMULATIVE, FIRST 27 WEEKS		
	July 8, 1978	July 9, 1977*		July 8, 1978	July 9, 1977*	MEDIAN 1973-1977**
Aseptic meningitis	75	121	88	1,266	1,271	1,131
Brucellosis	2	3	3	73	101	101
Chickenpox	1,430	2,104	1,380	116,934	155,643	140,442
Diphtheria	—	—	—	51	53	116
Encephalitis: Primary (arthropod-borne & unsp.)	14	14	14	310	340	420
Post-infectious	9	3	5	105	109	153
Hepatitis, Viral: Type B	276	311	204	7,602	8,489	5,752
Type A	495	460	574	14,751	16,202	18,291
Type unspecified	154	165	9	4,560	4,592	162
Malaria	19	20	9	301	248	162
Measles (rubella)	379	889	350	20,753	49,948	22,722
Meningococcal infections: Total	34	15	20	1,428	1,063	885
Civilian	33	15	19	1,411	1,057	862
Military	1	—	—	17	6	17
Mumps	223	166	602	12,055	14,742	41,184
Pertussis	33	24	—	901	465	—
Rubella (German measles)	325	192	136	13,995	17,354	14,081
Tetanus	2	—	—	36	31	34
Tuberculosis	509	539	539	15,289	15,672	16,422
Tularemia	3	5	3	42	68	68
Typhoid fever	14	6	7	220	176	180
Typhus fever, tick-borne (Rky. Mt. spotted)	61	47	31	398	478	323
Veneral diseases:						
Gonorrhea: Civilian	16,811	16,839	18,883	483,929	486,537	489,144
Military	694	497	593	12,816	14,076	15,055
Syphilis, primary & secondary: Civilian	347	414	414	10,706	10,659	12,566
Military	3	6	6	152	159	178
Rabies in animals	38	68	58	1,564	1,542	1,534

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1978		CUM. 1978
Anthrax	4	Poliomyelitis: Total	—
Botulism	50	Paralytic	—
Congenital rubella syndrome (Ups. N.Y. 1)	17	Psittacosis † (Ups. N.Y. 2, Ark. 1)	58
Leprosy (Calif. 2)	70	Rabies in man	—
Leptospirosis (Mo. 1, Tex. 4, Hawaii 1)	28	Trichinosis (Ohio 1)	36
Plague	2	Typhus fever, flea-borne (endemic, murine) (Tex. 3)	21

* Delayed reports received for calendar year 1977 are used to update last year's weekly and cumulative totals.

** Medians for gonorrhea and syphilis are based on data for 1975-1977.

† The following delayed report will be reflected in next week's cumulative total: Psittacosis: Tex. —1

TABLE III. Cases of specified notifiable diseases, United States, weeks ending July 8, 1978, and July 9, 1977 (27th week)

REPORTING AREA	ASEPTIC MENIN- GITIS	BRU- CEL- LOSIS	CHICKEN POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS (VIRAL), BY TYPE			MALARIA	
						Primary		Post in- fectious	B	A	Unspecified		
						1978	1977*	1978	1978	1978	1978		
UNITED STATES	75	2	1,430	-	51	14	14	9	276	495	154	19	301
NEW ENGLAND	-	-	206	-	-	1	2	1	4	10	14	1	12
Maine	-	-	17	-	-	-	-	-	-	1	-	-	1
N.H. †	-	-	-	-	-	-	-	-	-	3	-	-	1
Vt.	-	-	-	-	-	-	-	-	-	3	-	-	-
Mass.	-	-	77	-	-	-	1	-	-	-	14	-	3
R.I.	-	-	59	-	-	-	-	-	1	-	-	-	-
Conn.	-	-	53	-	-	1	1	1	3	3	-	1	7
MID. ATLANTIC	5	-	253	-	1	2	2	1	23	31	12	3	62
Upstate N.Y.	2	-	207	-	-	1	-	1	1	10	6	-	9
N.Y. City	2	-	35	-	1	-	2	-	2	8	2	1	25
N.J.	-	-	NN	-	-	-	-	-	-	-	-	-	13
Pa.	1	-	11	-	-	-	-	-	20	13	4	1	15
E.N. CENTRAL	5	-	612	-	-	3	3	-	47	75	8	3	16
Ohio	-	-	81	-	-	-	-	-	21	32	-	3	3
Ind.	-	-	114	-	-	-	2	-	-	-	-	-	3
Ill. †	-	-	36	-	-	-	-	-	5	12	-	-	3
Mich.	3	-	186	-	-	2	-	-	19	23	8	-	6
Wis.	2	-	195	-	-	-	1	-	2	8	-	-	1
W.N. CENTRAL	5	-	40	-	1	-	-	-	17	33	2	-	14
Minn.	-	-	-	-	-	-	-	-	7	8	-	-	3
Iowa	-	-	25	-	-	-	-	-	-	1	-	-	-
Mo. †	1	-	3	-	1	-	-	-	9	15	-	-	5
N. Dak.	-	-	8	-	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	2	-	-	-	-	-	1	5	1	-	1
Nebr.	1	-	-	-	-	-	-	-	-	-	-	-	3
Kans.	3	-	2	-	-	-	-	-	-	4	1	-	2
S. ATLANTIC	14	-	152	-	-	1	-	6	49	54	7	2	55
Del.	-	-	2	-	-	-	-	-	2	1	-	-	1
Md.	-	-	32	-	-	-	-	-	3	3	1	1	10
D.C.	-	-	-	-	-	-	-	-	-	-	-	-	-
Va. †	-	-	-	-	-	-	-	-	-	-	-	-	-
W. Va.	2	-	23	-	-	1	-	-	7	8	1	1	16
N.C.	-	-	52	-	-	-	-	-	1	2	-	-	1
N.C.	2	-	NN	-	-	-	-	-	3	4	1	-	1
S.C.	3	-	-	-	-	-	-	-	11	3	-	-	4
Ga.	5	-	-	-	-	-	-	-	16	19	-	-	6
Fla. †	5	-	43	-	-	-	-	6	6	14	4	-	16
E.S. CENTRAL	5	1	7	-	-	-	2	-	29	48	10	-	3
Ky.	1	-	3	-	-	-	1	-	14	16	5	-	1
Tenn.	1	-	NN	-	-	-	-	-	4	14	-	-	1
Ala.	4	1	3	-	-	-	-	-	9	5	5	-	1
Miss.	-	-	1	-	-	-	1	-	2	13	-	-	-
W.S. CENTRAL	13	1	43	-	1	3	1	1	19	57	32	1	17
Ark.	3	-	-	-	1	-	-	-	3	9	1	-	-
La.	2	-	NN	-	-	-	-	1	1	5	1	-	3
Okla. †	1	-	-	-	-	1	-	-	6	5	2	-	-
Tex. †	7	1	43	-	-	2	1	-	9	38	28	1	14
MOUNTAIN	2	-	50	-	3	-	-	-	15	50	32	-	4
Mont.	-	-	17	-	-	-	-	-	-	1	1	-	-
Idaho	2	-	-	-	-	-	-	-	-	2	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-	-	-	-	-
Colo.	-	-	23	-	2	-	-	-	2	7	6	-	1
N. Mex.	-	-	-	-	-	-	-	-	1	3	-	-	1
Ariz.	-	-	NN	-	-	-	-	-	10	19	18	-	1
Utah †	-	-	10	-	-	-	-	-	-	14	7	-	-
Nev.	-	-	-	-	1	-	-	-	2	4	-	-	1
PACIFIC	26	-	67	-	45	4	4	-	73	137	37	9	118
Wash. †	-	-	53	-	42	-	2	-	7	13	1	-	3
Oreg.	7	-	-	-	-	-	-	-	5	16	6	-	3
Calif. †	18	-	-	-	-	4	2	-	60	100	30	9	95
Alaska	1	-	8	-	3	-	-	-	-	3	-	-	2
Hawaii	-	-	6	-	-	-	-	-	1	5	-	-	15
Guam †	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-
P.R.	-	-	23	-	-	-	-	-	2	2	7	-	4
V.I.	-	-	-	-	-	-	-	-	-	-	-	-	1

NN: Not notifiable.

NA: Not available.

*Delayed reports received for 1977 are not shown below but are used to update last year's weekly and cumulative totals.

†The following delayed reports will be reflected in next week's cumulative totals: Asep. meng.: Mo. +7; Chickenpox: N.H. +1, Ill. +22, Utah +8, Calif. +1,

Guam +4; Diph.: Wash. - 6; Hep. B: N.H. +2, Ill. +12, Mo. +1, Okla. -1; Hep. A: N.H. +1, Ill. +12, Fla. +1, Tex. +1, Guam +1; Hep. unsp.: Mo. -1, Va. -2,

Tex. -1, Guam +1.

TABLE III (Cont. d). Cases of specified notifiable diseases, United States, weeks ending July 8, 1978, and July 9, 1977 (27th week)

REPORTING AREA	MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1978	CUM. 1978	CUM. 1977*	1978	CUM. 1978	CUM. 1977*	1978	CUM. 1978	1978	1978	CUM. 1978	CUM. 1978
UNITED STATES	379	20,753	49,948	34	1,428	1,063	223	12,055	33	325	13,995	36
NEW ENGLAND	16	1,925	2,429	2	68	46	6	696	-	10	676	-
Maine	8	1,306	164	-	6	3	1	480	-	1	145	-
N.H.†	-	44	510	-	6	3	-	11	-	-	97	-
Vt.	1	25	290	-	2	4	-	5	-	-	27	-
Mass.†	7	226	606	2	17	14	2	81	-	7	185	-
R.I.	-	7	58	-	16	1	3	27	-	-	40	-
Conn.	-	317	801	-	21	21	-	92	-	2	182	-
MID. ATLANTIC	93	1,898	7,754	4	236	139	15	514	2	27	2,746	1
Upstate N.Y.	39	1,249	3,399	2	77	31	7	182	2	11	477	-
N.Y. City	54	254	604	1	58	37	3	121	-	10	83	-
N.J.†	-	63	191	-	39	29	5	119	-	6	1,554	-
Pa.	-	332	3,560	1	62	42	-	92	-	-	632	1
E.N. CENTRAL	145	9,056	9,960	15	132	113	131	4,766	6	195	6,520	2
Ohio	4	454	1,076	15	47	36	26	725	3	88	1,314	1
Ind.	4	165	4,245	-	24	7	7	271	2	12	523	1
Ill.†	15	529	1,433	-	6	29	6	1,593	-	9	385	-
Mich.	109	6,523	881	-	44	29	63	1,301	1	65	2,847	-
Wis.†	13	1,385	2,325	-	11	12	29	876	-	21	1,451	-
W.N. CENTRAL	16	363	9,346	-	51	51	6	1,866	1	10	607	4
Minn.	-	34	2,595	-	10	19	-	15	1	-	124	-
Iowa	-	49	4,243	-	5	7	-	119	-	2	47	-
Mo.†	3	10	1,020	-	23	14	6	1,137	-	-	88	-
N. Dak.	2	186	22	-	3	1	-	11	-	6	79	-
S. Dak.	-	-	66	-	2	4	-	6	-	2	109	-
Nebr.	-	5	192	-	-	1	-	18	-	-	34	-
Kans.	11	79	1,207	-	8	5	-	560	-	-	126	4
S. ATLANTIC	61	4,410	4,249	6	362	246	13	635	6	9	937	5
Del.	-	5	22	-	12	17	-	43	-	-	34	-
Md.	4	37	367	-	15	15	2	57	-	-	5	1
D.C.	-	-	14	-	1	-	-	1	-	-	1	-
Va.†	20	2,636	2,510	1	43	19	3	113	-	2	223	-
W. Va.	13	993	202	-	7	8	1	151	2	4	316	-
N.C.	16	108	59	1	71	57	3	56	-	1	168	-
S.C.	3	191	144	-	24	24	-	15	-	2	26	1
Ga.	-	15	725	2	44	36	-	61	4	-	1	-
Fla.	5	455	206	2	145	70	4	138	-	-	163	3
E.S. CENTRAL	18	1,319	1,897	3	115	116	17	1,008	7	24	466	1
Ky.	4	108	1,141	1	21	19	1	179	2	4	121	1
Tenn.	13	916	652	-	29	30	3	428	5	19	179	-
Ala.	-	89	76	1	35	46	9	343	-	1	19	-
Miss.	1	206	28	1	30	21	4	58	-	-	147	-
W.S. CENTRAL	13	903	2,004	3	221	189	23	1,568	2	5	839	13
Ark.	-	16	29	-	18	9	-	575	-	-	57	1
La.	-	311	74	2	89	70	2	56	-	-	471	1
Okla.	-	13	53	-	16	10	-	4	-	-	11	2
Tex.†	13	563	1,848	1	98	100	21	933	2	5	300	9
MOUNTAIN	3	209	2,452	-	30	28	1	345	2	14	184	1
Mont.	-	102	1,145	-	1	2	-	136	-	2	17	-
Idaho	-	1	160	-	2	4	-	20	-	-	2	-
Wyo.	-	-	14	-	-	1	-	-	-	-	-	-
Colo.	-	28	492	-	2	1	1	74	-	1	43	-
N. Mex.	-	-	253	-	7	7	-	15	-	-	3	-
Ariz.	3	20	240	-	11	10	-	10	-	11	87	-
Utah	-	44	6	-	4	2	-	86	2	-	23	1
Nev.	-	14	92	-	3	1	-	4	-	-	9	-
PACIFIC	14	670	9,857	1	213	135	11	657	7	31	1,020	9
Wash.	6	92	515	1	36	16	-	163	2	-	90	-
Oreg.	2	140	335	-	19	17	1	74	1	-	83	-
Calif.	6	434	8,910	-	149	78	10	340	4	31	843	9
Alaska	-	-	60	-	5	22	-	6	-	-	2	-
Hawaii	-	4	34	-	4	2	-	24	-	-	2	-
Guam †	NA	24	-	-	-	-	NA	19	NA	NA	1	-
P.R.†	3	190	808	-	2	1	12	964	1	-	15	4
V.I.	-	6	14	-	1	-	-	1	-	-	1	-

NA: Not available.

* Delayed reports received for 1977 are not shown below but are used to update last year's weekly and cumulative totals.

† The following delayed reports will be reflected in next week's cumulative totals: Measles: N.H. +1, Mass. -2, Ill. +28, Wis. -1, Mo. +1, Va. -3, Tex. -1; Mumps: Mass. -1, N.J. +3, Ill. +6, Va. +1, Guam +12, P.R. +15; Pertussis: Mo. +2; Rubella: Ill. +6, Mo. +2, Va. +5; Tetanus: Guam +1.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending July 8, 1978, and July 9, 1977 (27th week)

REPORTING AREA	TUBERCULOSIS		TULA-REMICIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		VENEREAL DISEASES (Civilian)						RABIES (in Animals)
	1978	CUM. 1978	CUM. 1978	1978	CUM. 1978	1978	CUM. 1978	GONORRHEA			SYPHILIS (Pri. & Sec.)			CUM. 1978
								1978	CUM. 1978	CUM. 1977*	1978	CUM. 1978	CUM. 1977*	
UNITED STATES	509	15,289	42	14	220	61	398	16,811	483,929	486,537	347	10,706	10,659	1,564
NEW ENGLAND	14	498	-	-	36	1	9	485	12,616	12,666	8	317	443	61
Maine	2	36	-	-	-	-	-	51	957	926	-	8	14	56
N.H.†	-	8	-	-	5	-	-	21	574	506	-	4	3	-
Vt.	1	22	-	-	1	-	-	2	296	323	-	3	6	-
Mass.	6	287	-	-	21	1	4	182	5,536	5,468	3	196	313	3
R.I.	1	33	-	-	4	-	1	25	887	1,025	-	13	7	-
Conn.†	4	112	-	-	5	-	4	204	4,366	4,418	5	93	100	2
MID. ATLANTIC	100	2,652	2	2	23	7	20	1,871	52,830	50,401	37	1,451	1,498	37
Upstate N.Y.	8	385	1	-	7	1	10	380	8,872	8,275	8	110	143	31
N.Y. City	33	951	1	-	10	1	2	601	20,626	20,416	23	1,026	941	-
N.J.	11	663	-	-	2	4	-	1	890	9,965	5	161	193	4
Pa.	48	653	-	-	2	5	7	NA	13,367	13,101	1	154	221	2
E.N. CENTRAL	114	2,325	1	2	11	9	13	2,578	70,799	75,066	81	1,157	1,174	68
Ohio	24	426	1	2	5	7	8	45	17,711	19,300	11	222	271	6
Ind.	26	285	-	-	-	-	1	196	6,867	6,409	1	56	87	5
Ill.	34	886	-	-	1	2	4	1,507	22,827	25,062	66	731	627	16
Mich.	33	615	-	-	5	-	-	650	16,789	17,255	1	112	137	3
Wis.†	-	103	-	-	-	-	-	180	6,605	7,040	2	36	52	38
W.N. CENTRAL	10	514	9	-	10	-	11	752	24,261	25,447	6	259	240	341
Minn.	3	100	-	-	4	-	-	5	4,161	4,581	4	109	75	116
Iowa†	-	54	-	-	2	-	-	167	2,750	3,015	2	37	21	68
Mo.†	3	220	8	-	2	-	6	385	10,303	10,684	-	68	82	44
N. Dak.	1	23	-	-	-	-	1	9	445	463	-	2	2	54
S. Dak.†	-	43	-	-	-	-	-	30	874	666	-	1	2	40
Nebr.	-	10	-	-	-	-	-	24	1,810	2,234	-	7	24	2
Kans.	3	64	1	-	2	-	4	132	3,918	3,804	-	35	34	17
S. ATLANTIC	84	3,287	4	2	28	41	239	4,256	117,212	119,317	65	2,838	3,042	208
Del.†	2	26	-	-	1	-	4	41	1,591	1,591	-	5	16	1
Md.*	15	510	3	-	1	9	53	637	14,926	15,129	7	225	208	-
D.C.	2	123	-	-	1	-	-	191	7,764	7,854	8	230	319	-
Vc.†	-	345	1	-	6	6	48	295	10,904	12,349	2	243	302	4
W. Va.	2	110	-	-	1	2	8	63	1,704	1,731	-	8	1	2
N.C.	15	490	-	-	2	18	77	624	16,316	17,702	4	261	439	5
S.C.†	3	288	-	-	1	3	27	573	11,751	11,297	10	142	133	46
Ca.	16	464	-	-	2	4	22	394	22,268	22,781	30	696	583	139
Fla.	27	871	-	-	10	-	-	1,441	29,988	28,883	4	1,028	1,041	11
E.S. CENTRAL	55	1,447	5	1	5	2	60	1,190	41,703	43,546	27	543	367	78
Ky.†	5	321	2	1	2	-	9	147	5,109	5,806	2	69	43	44
Tenn.†	10	442	3	-	1	2	44	509	15,338	17,752	6	188	117	16
Ala.†	10	345	-	-	1	-	4	46	12,005	11,959	9	85	64	18
Miss.	30	339	-	-	1	1	-	3	488	9,251	10	201	143	-
W.S. CENTRAL	53	1,761	17	4	26	1	42	2,292	67,538	61,651	44	1,663	1,409	531
Ark.	2	191	13	1	2	-	8	312	5,002	4,744	2	43	30	78
La.	-	282	1	-	1	-	-	233	11,012	9,155	-	343	328	11
Okl.	5	188	3	-	2	-	24	242	6,361	5,777	-	47	42	121
Tex.†	46	1,100	-	3	21	1	10	1,505	45,163	41,975	42	1,230	1,009	321
MOUNTAIN	5	439	2	-	12	-	3	689	17,950	19,637	5	209	213	26
Mont.	-	31	-	-	-	-	2	52	1,078	998	-	7	3	3
Idaho†	-	19	2	-	5	-	-	18	664	919	-	5	4	-
Wyo.	-	11	-	-	-	-	-	25	412	475	-	4	2	-
Colo.	-	37	-	-	2	-	-	210	5,049	5,103	2	58	65	-
N. Mex.	1	73	-	-	1	-	-	138	2,592	2,875	-	54	40	9
Ariz.	3	210	-	-	2	-	-	86	4,528	5,717	-	48	88	12
Utah	1	23	-	-	1	-	-	24	1,000	1,077	-	11	4	2
Nev.	-	35	-	-	1	-	1	136	2,627	2,473	3	22	7	-
PACIFIC	74	2,366	2	1	69	-	1	2,698	79,020	78,806	74	2,269	2,273	214
Wash.	NA	82	-	-	6	-	-	405	6,208	5,934	NA	80	115	-
Orig.	6	99	-	-	1	-	-	249	5,571	5,457	4	76	66	3
Calif.	59	1,824	2	1	55	-	1	1,895	63,193	63,135	70	2,083	2,054	205
Alaska†	-	46	-	-	-	-	-	116	2,560	2,570	-	7	16	6
Hawaii	9	315	-	-	7	-	-	33	1,488	1,710	-	23	22	-
Guamt	NA	33	-	NA	-	NA	-	NA	97	118	NA	-	1	-
P.R.	7	219	-	-	1	-	-	29	1,225	1,683	7	232	294	13
V.I.†	-	3	-	-	2	-	-	1	105	100	1	9	3	-

NA: Not available.

*Delayed reports received for 1977 are not shown below but are used to update last year's weekly and cumulative totals.

†The following delayed reports will be reflected in next week's cumulative totals: TB: Md. -2, V.I. +1, T. fever: Mo. +1, RMSF: Mo. +1, Md. -1, Va. -1, S.C. -3, Ky. +12, Idaho +1 mil.; GC: N.H. +1 mil., Conn. +13 mil., Wis. -1 civ., Del. +1 civ., Ky. -48 mil., Tenn. +2 civ., Tex. -55 civ +55 mil., Alaska -1 civ. +1 mil., Guam +3 civ., V.I. +5 civ.; Syphilis: Iowa -5; An. rabies: S. Dak. +6, Ala. +1.

TABLE IV. Deaths in 121 U.S. cities,* week ending
July 8, 1978 (27th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I** TOTAL	REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I** TOTAL
	ALL AGES	>65	45-64	25-44	<1			ALL AGES	>65	45-64	25-44	<1	
NEW ENGLAND	557	351	137	35	13	26	S. ATLANTIC	880	496	244	71	40	41
Boston, Mass.	151	82	40	16	5	11	Atlanta, Ga.	114	65	29	9	4	2
Bridgeport, Conn.	33	19	10	1	-	3	Baltimore, Md.	168	93	50	14	4	7
Cambridge, Mass.	22	16	5	1	-	2	Charlotte, N.C.	41	16	13	6	1	-
Fall River, Mass.	30	21	7	-	-	-	Jacksonville, Fla.	73	37	21	10	3	5
Hartford, Conn.	56	32	13	7	1	1	Miami, Fla.	88	54	26	5	3	3
Lowell, Mass.	30	22	5	1	-	1	Norfolk, Va.	40	20	15	-	4	7
Lynn, Mass.	12	9	3	-	-	1	Richmond, Va.	81	47	26	4	2	4
New Bedford, Mass.	25	18	4	2	-	1	Savannah, Ga.	25	11	11	1	1	2
New Haven, Conn.	43	28	10	3	2	-	St. Petersburg, Fla.	73	62	5	4	2	3
Providence, R.I.	44	28	14	-	1	2	Tampa, Fla.	60	32	18	6	3	4
Somerville, Mass.	7	6	-	1	-	1	Washington, D.C.	85	40	27	9	8	4
Springfield, Mass.	44	27	12	2	2	1	Wilmington, Del.	32	19	3	3	5	-
Waterbury, Conn.	10	8	2	-	-	1							
Worcester, Mass.	50	35	12	1	2	1							
							E.S. CENTRAL	537	310	135	41	22	26
MID. ATLANTIC	2,441	1,512	619	172	56	94	Birmingham, Ala.	60	40	9	7	2	1
Albany, N.Y.	51	33	13	4	1	-	Chattanooga, Tenn.	52	32	11	3	3	2
Allentown, Pa.	26	12	8	4	-	-	Knoxville, Tenn.	31	21	7	1	-	1
Buffalo, N.Y.	138	68	26	6	2	6	Louisville, Ky.	98	50	32	8	4	9
Camden, N.J.	26	12	8	1	1	-	Memphis, Tenn.	119	63	36	12	2	6
Elizabeth, N.J.	40	25	12	1	1	3	Mobile, Ala.	57	28	17	7	3	-
Erie, Pa.	29	14	9	3	-	2	Montgomery, Ala.	28	14	5	1	4	1
Jersey City, N.J.	48	33	12	2	-	1	Nashville, Tenn.	92	62	19	2	4	6
Newark, N.J.	61	24	29	2	2	5							
N.Y. City, N.Y.	1,247	784	297	101	26	44	W.S. CENTRAL	726	404	191	61	31	22
Paterson, N.J.	31	22	6	-	-	1	Austin, Tex.	32	24	2	2	3	4
Philadelphia, Pa.	394	227	116	26	17	13	Baton Rouge, La.	31	16	12	2	1	1
Pittsburgh, Pa.	52	29	15	5	2	1	Corpus Christi, Tex.	27	13	8	3	2	-
Reading, Pa.	29	24	4	-	1	1	Dallas, Tex.	121	55	37	11	5	2
Rochester, N.Y.	102	74	18	6	-	10	El Paso, Tex.	34	18	11	2	2	1
Schenectady, N.Y.	17	14	3	-	-	1	Fort Worth, Tex.	39	20	12	4	1	1
Scranton, Pa.	17	11	4	1	1	1	Houston, Tex.	104	56	32	8	2	2
Syracuse, N.Y.	77	45	23	5	2	1	Little Rock, Ark.	52	29	10	5	4	2
Trenton, N.J.	37	23	11	3	-	5	New Orleans, La.	104	65	20	14	2	-
Utica, N.Y.	21	18	-	1	-	-	San Antonio, Tex.	101	53	30	3	7	1
Yonkers, N.Y.	26	20	5	1	-	-	Shreveport, La.	28	19	6	3	-	2
							Tulsa, Okla.	53	36	11	4	2	6
E.N. CENTRAL	1,928	1,118	510	134	84	41	MOUNTAIN	513	284	132	30	31	13
Akron, Ohio	50	33	8	3	5	-	Albuquerque, N. Mex.	54	23	18	6	3	4
Canton, Ohio	44	24	14	3	1	-	Colo. Springs, Colo.	35	23	7	1	2	-
Chicago, Ill.	483	271	126	35	20	4	Denver, Colo.	105	65	24	5	4	-
Cincinnati, Ohio	131	71	41	6	9	4	Las Vegas, Nev.	58	23	23	6	1	-
Cleveland, Ohio	143	84	37	14	3	5	Ogden, Utah	26	20	2	1	3	6
Columbus, Ohio	95	59	21	7	4	4	Phoenix, Ariz.	106	61	23	4	7	1
Dayton, Ohio	83	44	26	6	3	1	Pueblo, Colo.	25	14	7	2	1	2
Detroit, Mich.	242	141	62	22	14	2	Salt Lake City, Utah	50	27	11	3	6	-
Evansville, Ind.	35	21	10	1	1	1	Tucson, Ariz.	54	28	17	2	4	-
Fort Wayne, Ind.	42	28	9	1	1	1							
Gary, Ind.	14	6	5	1	-	-	PACIFIC	1,355	866	307	95	41	44
Grand Rapids, Mich.	47	27	18	-	1	4	Berkeley, Calif.	13	9	2	2	-	1
Indianapolis, Ind.	126	70	33	14	6	-	Fresno, Calif.	65	35	11	11	5	3
Madison, Wis.	43	22	10	5	3	3	Glendale, Calif.	27	20	7	-	-	1
Milwaukee, Wis.	114	79	27	2	2	3	Honolulu, Hawaii	41	22	7	6	2	-
Peoria, Ill.	44	27	10	2	4	2	Long Beach, Calif.	93	56	23	7	4	1
Rockford, Ill.	30	13	8	3	4	4	Los Angeles, Calif.	408	290	87	23	8	12
South Bend, Ind.	22	13	7	1	-	2	Oakland, Calif.	61	38	13	5	4	-
Toledo, Ohio	82	47	24	6	1	1	Pasadena, Calif.	23	14	2	3	1	-
Youngstown, Ohio	58	38	14	2	2	-	Portland, Ore.	75	51	18	1	2	2
							Sacramento, Calif.	55	33	15	2	2	5
W.N. CENTRAL	646	421	144	26	21	17	San Diego, Calif.	111	70	30	5	4	5
Des Moines, Iowa	62	41	16	5	-	-	San Francisco, Calif.	144	85	38	11	6	2
Duluth, Minn.	15	8	6	1	-	1	San Jose, Calif.	53	37	11	4	-	-
Kansas City, Kans.	46	23	12	1	4	-	Seattle, Wash.	117	68	27	13	2	7
Kansas City, Mo.	133	90	28	4	3	5	Spokane, Wash.	34	23	9	-	1	3
Lincoln, Nebr.	15	8	5	-	1	1	Tacoma, Wash.	35	25	7	2	-	2
Minneapolis, Minn.	60	37	11	2	6	1							
Omaha, Nebr.	56	39	8	4	1	-	TOTAL	9,583	5,767	2,419	665	339	324
St. Louis, Mo.	174	116	39	5	4	5	Expected Number	10,903	6,498	2,816	704	422	347
St. Paul, Minn.	45	34	7	3	1	1							
Wichita, Kans.	40	25	12	1	1	3							

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

Hydroquinone Poisoning — Continued

Chemical analysis of water specimens taken shortly after the connecting hose had been removed showed non-toxic levels of lead, nickel, and dissolved solids; the pH was in an acceptable range. No hydroquinone, a chemical used in photographic developing, was found in the water samples. However, subsequent liquid chromatographic analysis of serum specimens of 6 ill patients found it to be present in 3 specimens ($>.1 \mu\text{g}/\text{ml}$); no hydroquinone was found in specimens from 6 non-ill controls.

Reported by RR Hooper, LCDR, MC, SR Husted, LCDR, MSC, EL Smith, LT, MSC, Navy Environmental and Preventive Medicine Unit Number Five, San Diego, California; Bacterial Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: Hydroquinone, 1, 4 dihydroxybenzene, is used extensively as a photographic developer and in the manufacture of certain dyes. The most common toxic exposures are from aerosolized materials (fumes) affecting the eyes and skin; this can lead to depigmentation and corneal lesions. Ingestion of this compound results in gastrointestinal symptoms, such as those described in this outbreak. Heavier exposure can cause convulsions, cardiovascular collapse, pulmonary edema, and systemic acidosis. Rarely, hydroquinone has been etiologically implicated in methemoglobinemia and renal and hepatic failure. Therapy is limited to general supportive measures and to oral administration of activated charcoal or vegetable oils to absorb any of the chemical remaining in the gastrointestinal tract (1,2).

References

1. Gosselin RE, Hodge HC, Smith RP, Gleason MN: Clinical Toxicology of Commercial Products. 4th ed. Baltimore, Williams and Wilkins Co, 1976, p 127
2. Hunter D: The Diseases of Occupations. 4th ed. Boston, Little, Brown and Company, 1969, pp 532-534

Follow-up on *Rhizopus* Infections Associated with Elastoplast* Bandages — United States

Since the February 1978 report on *Rhizopus* infections associated with Elastoplast bandages in Minnesota (1,2), 10 hospitals elsewhere in the United States have reported to CDC that 17 additional patients have had cutaneous infections caused by *Rhizopus* species. Several patients were identified by retrospective review; the earliest patient was seen in April 1977. Of the 17 patients, 14 had undergone surgical procedures and had had Elastoplast bandages placed over sterile gauze pads which covered the operative wound. The bandages and dressings remained in place for varying periods of time post-operatively, and lesions were usually present upon removal of the dressing. Lesions ranged from vesiculo-pustular eruptions to ulceration with eschar formation, and in some patients, skin necrosis was present and required debridement. Three other patients had similar cutaneous lesions after Elastoplast was applied over sterile gauze covering central venous line insertion sites (2 patients) and a bite wound (1 patient). One patient had diabetes mellitus, one had a malignancy, and one was on steroids for rheumatoid arthritis.

In 4 of the 10 hospitals, *Rhizopus* species have been isolated from either unused or partially used Elastoplast. Isolates from Elastoplast available from 3 of the 4 hospitals as well as isolates available from 8 of the 17 patients have been identified as *R. rhizopodiformis* by the Northern Regional Research Laboratory (NRRL), U. S. Department of Agriculture (USDA). The isolates originally reported (1,2) had been identified as *R. oryzae*, but these isolates are no longer available to confirm that identification.

*Use of trade names is for identification only and does not constitute endorsement by the Public Health Service, U.S. Department of Health, Education, and Welfare.

Rhizopus Infections — Continued

Reported by Beiersdorf, Inc., South Norwalk, Connecticut; JJ Ellis, PhD, Agricultural Research Culture Collection, NRRL, USDA; Bur of Laboratories, Hepatitis Laboratories Div, Hospital Infections Laboratory Section, Epidemiologic Investigations Laboratory Br, Hospital Infections Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: Infections with *Rhizopus* species are not routinely reported to CDC, and there is no information about patients with *Rhizopus* infections who have not been exposed to Elastoplast or who have been exposed to other wound-dressing materials. Approximately 1 million Elastoplast bandages per year are used in hospitals and, based upon the number of cases of *Rhizopus* infection reported to CDC, the risk of adverse reaction appears to be low. However, the characteristic clinical reactions reported (superficial cutaneous infection only at skin sites that had contact with the bandage) for the majority of patients and the recovery of *Rhizopus* species from the unused product suggest an association between use of the product and disease in patients.

The manufacturer does not guarantee a sterile product but does report that Elastoplast bandages are now being treated with cobalt irradiation before they are released to hospital suppliers. Preliminary studies conducted by CDC suggest that ethylene oxide sterilization of rolled bandages intrinsically or artificially contaminated with *Rhizopus*, vegetative bacteria, or bacterial spores is not effective. The manufacturer and CDC recommend that Elastoplast bandages should not be used over open wounds and should not come in contact with sterile fields if the maintenance of sterility is vital.

References

1. MMWR 27:33-34, 1978
2. MMWR 27:190, 1978

Measles — North Carolina

From December 17, 1977, through January 20, 1978, 40 cases of measles were reported from Buncombe County, North Carolina. The majority of cases and the highest age-specific attack rate occurred in 10- to 14-year-old children (Table 2). The outbreak prompted a review of immunization records in all 50 county schools.

TABLE 2. Percent distribution and age-specific attack rates for measles, Buncombe County, North Carolina, Dec. 17, 1977-Jan. 20, 1978

Age group	No. of cases	Percent	Attack rate*
0-4	3	7.5	28.6
5-9	4	10.0	35.1
10-14	22	55.0	175.6
15-19	8	20.0	65.5
20+	3	7.5	25.7
	<u>40</u>	<u>100.0</u>	

*Cases per 100,000 population

Of the 34,634 students in grades kindergarten through 12, 12,996 (38%) had no record of having had measles or having received measles vaccine when 12 months of age or older. The parents of children without an adequate immunization record were informed that their children would have to provide written evidence of measles vaccination in order to remain in school. Between January 16 and January 31, 1978, over 10,000 children received measles vaccine in public clinics held in the schools; private physicians vaccinated the remaining 3,000 children.

Measles - Continued

Although the number of affected children was small, a vaccine efficacy study in 1 school revealed greater than 90% vaccine efficacy for children who were adequately vaccinated.

The parents of all children with measles were interviewed in an effort to determine why their children were not protected against measles. Immunization histories were verified with private physicians and public health clinics. Twenty-three (58%) of the children had a history of previously receiving measles vaccine. However, 14 of these 23 children had been vaccinated when less than 12 months of age and had not been revaccinated. Two of the children had been vaccinated at 12-14 months of age, and 7 had been vaccinated at 15+ months of age.

The parents of 9 unvaccinated children thought that their children had been vaccinated until learning otherwise when the appropriate health-care records were received. Some of these parents had confused rubella vaccine with measles vaccine. Three other parents did not seek measles vaccine for their children because they thought that their children had already had natural measles. The parents of 3 children said that they were unaware of the availability of measles vaccine, and a 15-month-old child with measles had been scheduled to be vaccinated when it was learned he had contracted measles.

Reported by H Collins, E Crawford, RN, H Farrell, RN, A Irwin, RN, JD Tenney, MD, MPH, Buncombe County Health Dept; M Hines, DVM, State Epidemiologist, N McCormack, MD, North Carolina Dept of Human Resources; Immunization Div, Bur of State Services, and Field Services Div, Bur of Epidemiology, CDC.

Editorial Note: This outbreak, in which the parents of 34 (84%) of the children who developed measles thought that the child had been adequately protected against disease, illustrates the need for parents, school officials, and health-care providers to review carefully immunization records of children of all ages. Had the immunization records of children been carefully reviewed before this outbreak occurred, at least 27 (68%) of the 40 children who contracted the disease would have been identified as being inadequately protected against measles.

The Morbidity and Mortality Weekly Report, circulation 78,750, is published by the Center for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Center for Disease Control, Attn: Editor, Morbidity and Mortality Weekly Report, Atlanta, Georgia 30333.

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